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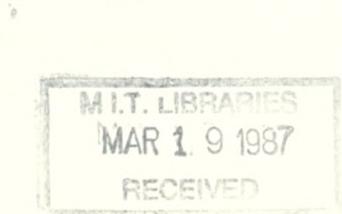
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Groups in Organizations: Extending Laboratory Models

This paper focuses on task groups in organizations, while much of the research on small groups focuses on the individual. In the individual approach, the group is seen as a setting that shapes individual attitudes, attributions, and decisions. A recent chapter on Intergroup Relations (Stephan, 1984: 599) exemplifies this approach: "First, the level of analysis of a social psychological inquiry into intergroup relations is the individual and his or her relationships with social groups. The primary justification for focusing on the individual level of analysis is that it is the individual's perception of social reality and the processing of this information that influence individual behavior." Missing from this perspective is the study of groups qua groups and how a group interacts with its context.

An alternative focus for small group research is to look from the group boundary outward. An external perspective shifts the focus of research so that 1) the group is the level of analysis, 2) the social context of groups is examined to explain behavior, and 3) the group has an existence and purpose apart from serving as a setting and apart from the individuals who compose it (Pfeffer, 1986).

The external perspective requires a different set of research questions. Rather than "How does the group influence individuals?", the question is "How does the organization influence the group?" The question is not "How do individuals attend to the group and model it" but "How does the group model and reach out to the organization"? Most significantly, the focus is not solely on intragroup decision making and the impact of roles on group members, but on examining the internal and

boundary spanning roles and decisions that are most appropriate in a particular environment.

This perspective is not new. At the organizational level of analysis, resource dependence, population ecology, and interorganizational theorists have refocused research toward organizations functioning in their environments, rather than merely as settings for managerial functioning (see Aldrich & Pfeffer, 1976; McKelvey, 1982; Whetten, 1983). At the group level, group-environment interactions have played a primary role in several research streams, the Hawthorne studies and studies of intergroup competition, for example (see Homans, 1950; Sherif, 1966). More recent research also reflects an increased interest in the impact of organizational variables on group process and performance (see Goodman, 1986; Hackman, 1983).

Although the perspective is not new this sort of research has not reached beyond the organizational behavior research community. It may be quite new to the readers of this volume. By pulling together the findings of researchers who are using parts of this perspective, possibly without knowing it, I have tried to see what new insights arise. Also, borrowing from the organizational level of analysis allows new ideas for group theory to emerge. Finally, summarizing and applying the outward-focusing perspective to key group research areas provides a means of integrating prior perspectives with this one.

This paper focuses on how groups function in a setting of external constraints and opportunities. More specifically, it examines ways of analyzing and describing the organization and external task environment, ways in which that environment constrains group behavior, and ways in which the group proactively tries to adapt to, and control, that

environment. These new variables have application for old theories of group development and group decision making. They suggest new directions for group research.

Some Limitations and Definitions

To bound the inquiry into the relationship between the group and its environment we need some definitions. First we are interested primarily in groups within organizations. A group is a set of interdependent individuals who view themselves as a group, and who have the common goal of producing something (Alderfer, 1976; Goodman, 1986). The "something" could be a new product, a service, a policy decision, or a marketing plan.

Group effectiveness is the major output of small-group behavior. Effectiveness has three components: group performance, satisfaction of group-member needs, and the ability of the group to exist over time (Hackman & Morris, 1975). Group effectiveness is judged by the people who use or buy the group's product or service (say, the task assigner or the customer), as well as by group members themselves.

Group process includes the intragroup and intergroup actions that transform resources into a product. Process includes both the way in which group members interact with one another, and the way in which they interact with those outside the group boundaries. Although many group researchers have emphasized group member interaction, boundary-spanning behaviors are important in the case of organizational task groups that depend on organizational members outside the group for resources, information, or support. Support for this contention comes from a study of a hundred sales teams (Gladstein, 1984) whose members conceptualized process as both internal and external interaction.

The environment of the group is a combination of the organization in

which the group is situated and its external task environment. The external task environment consists of entities outside the organizational boundaries that either provide input or receive output from the group. It could include customers, suppliers, competitors, or government agencies that regulate the product the group is working on.

The External Perspective: Borrowing from Organization Theorists

Organization theorists from a variety of theoretical orientations--resource dependence, strategic management, adaptation, and population ecology--have explored the relationship between an organization and its environment. Although their work has a different emphasis from work at the group level, it seems appropriate to review briefly their theories with the aim of borrowing some concepts. Given the limitations of space, the goal of this section is not to describe these orientations fully (see Astley & Van de Ven, 1983 for a thorough review) but to draw out salient contributions to the external perspective.

Resource Dependence

The resource dependence perspective asserts that interdependence with, and uncertainty about, actions of those outside the organization creates uncertainty as to the survival of the organization. Organizations therefore try to manage these external dependencies. They are never completely successful, however, which gives rise to new patterns of dependence and interdependence requiring further management (Pfeffer, 1985). These patterns are a source of intergroup power, because those groups that have resources that are needed and scarce are more powerful (Brett & Rognes, 1986).

From the resource dependence perspective, the most critical determinant of organizational viability is the ability to obtain critical resources (Pfeffer & Salancik, 1978). A quest for control over resources, and a decrease in dependence, is seen as an imperative for all organizations (Ancona & Salk, 1986). Common mechanisms by which organizations deal with their dependence include interlocking directorates, mergers and acquisitions, and joint ventures (see Pennings, 1980; Pfeffer, 1972; Van de Ven & Walker, 1984). These structures serve to co-opt, absorb, or partially absorb interdependence. As an example, a company that depends heavily on a supplier who is consistently late on delivery and poor on quality can acquire the supplier hence gaining more control over delivery and quality.

Strategic Management

Strategic management theorists, like the resource dependence theorists, posit an environment that is not fixed and immutable; it can be changed and manipulated through reorganization and negotiation to fit the needs of top management (Lorange, 1980). In contrast to the resource dependence perspective which stresses environmental constraints on organizational action, however, the strategic management view stresses the choices and autonomy of individuals in organizations. According to the resource dependence perspective, an organization is constrained in that it must establish and stabilize negotiations with more powerful entities. In contrast, the strategic management school does not view the environment as an objective reality but as an entity that can be enacted to embody the meanings of individuals--particularly those in power (Astley & Van de Ven, 1983). For example, revolutionary factions can be portrayed as traitors or as freedom fighters. This perspective stresses that organizations do

not necessarily have to be seen as reactive to the environment; they can be proactive. In fact, they partially create the environment they face.

Adaptation

In contrast to the proactive view of the previous orientations is the adaptation, or system-structural view, which argues that the manager's role is reactive and adaptive. "The manager must perceive, process, and respond to a changing environment and adapt by rearranging internal organizational structure to ensure survival or effectiveness" (Astley & Van de Ven: 248).

For example, managers must match the information-processing capacity of their units with the information-processing requirements of the unit's task. Organizations operating in an expanding or high growth market have more information-processing requirements than those operating in a stable market. To increase their information-processing capacity, the organizations facing an expanding market have to add employees and hence form new organizational structures (Greiner, 1972). These organizations can adapt to their environment by having more periods of revolutionary, as opposed to evolutionary, change in structures, processes, and people (Romanelli & Tushman, 1986).

Population Ecology

Another organizational perspective is the population ecology model, which ascribes little power to the manager to either act or react. This view stresses the limits to strategic choice and to adaptation. It describes environmental resources as structured in the form of "niches" beyond organizational manipulation. Organizations are at the mercy of their environments--they either fit into a niche or are "selected out" and fail. For example, even if management sees a decline in demand for a

particular product and a higher demand for another product, sunk costs, historical precedent, and resistance to change limit its ability to adapt (Astley & Van de Ven, 1983). Firms producing this product may differ from one another in various ways. Some may offer high quality, while others offer low price. According to population ecologists, some firms will flourish more in a given environment than others. "Successful" firms are selected by the environment in the sense that some of their ways of organizing and operating will work better in a given environment than another. Here the focus of analysis is not on the organization but on the population of organizations within a given niche.

One of the major things that group theorists can borrow from the population ecology model is the description of the environment. This model argues that certain types of environments exist that reward organizations selectively; some survive, others fail. Aldrich (1979) defines six characteristics of the environment. Environments can be categorized by the degree to which they are rich or lean, homogeneous or heterogeneous, stable or unstable, concentrated or dispersed, there is consensus or dissension, and turbulence or lack thereof. Each characteristic rewards particular ways of behaving. For example, organizations in a lean environment have little access to resources, and hence efficiency in the use of resources is rewarded.

Applying Organization Theory to Groups

I do not intend to argue for the correctness of one organization-environment model over another. In any case, each model represents a "pure" type, in reality, research has tended to show that aspects of several models may operate at once. Taking a middle of the road stance, we will posit that organizations, and groups, neither totally subjectively

define (strategic adaptation) nor totally react to their environments (system-structural view). I assume that management has some leeway in creating and defining the group context; it does not simply engineer the correct response to organizational parameters. Similarly, groups operate by certain rules within objective environmental conditions. Managers who want to succeed have choices, but complete disregard for the rules cannot serve their interests. One can claim that one's group is doing wonderful work, daring anyone to prove otherwise, sometimes for long periods of time, but when sales figures slide, reality is quite influential.

The middle-of-the-road stance applies to the role of the environment as well. Here we do not assume either that organization or group survival is determined completely by natural selection procedures (population ecology), or that there is complete voluntary choice of how to proceed (strategic adaptation). Rather, managers choose how to configure resources and approach their environment within the constraints imposed by that environment. Thus, we will assume that groups, like organizations, need to 1) manage their dependence on other parts of the organization and task environment, 2) mold or enact parts of their environment, 3) adapt to environmental demands, and 4) watch for being "selected out." While it might be dangerous to move directly from the organization to the group, borrowing some concepts may prove useful. Several implications stand out in applying these new orientations to groups.

First and foremost is the notion that groups, like organizations, can be proactive vis-a-vis their environment. In contrast to the standard input-process-output model, which views a group as a function of environmental inputs, a new view emerges: a group often can alter and control the inputs. Rather than the view that the organization endows a

group with resources and information that determine group power and productivity, is the notion that the group can be a more active player in determining the distribution of resources. Second, in contrast to many group leader and member schema that view the primary determinant of group success to be changes in internal processes (Gladstein, 1984), this model provides a new framework, where the management of external dependence and adaptation to external demands allows success.

Third, the external perspective offers a different set of dimensions by which to categorize the group environment. Some group researchers to date have concentrated on defining the characteristics of a "supportive" environment, one that facilitates group effectiveness (McCormick, 1985). Hackman (1983) postulates that the organization context contributes to effectiveness with rewards and objectives for good performance, availability of task-relevant training and technical consultation, and clear and complete data about performance requirements, constraints, and consequences. Bushe (1986) argues that a supportive environment consists of 1) recognition, 2) responsiveness to the group's requests for information, resources, and action, 3) legitimization of the group's task and process, and 4) expectation of group success. In a study of planned change projects, McCormick (1985) added openness of group influence and consistency in messages sent to the group. From the external point of view, these researchers suggest that an environment can be set up that reduces the group's external dependence and task uncertainty.

The population ecology perspective, on the other hand, provides a very different approach. Its emphasis is not simply on how the environment can provide resources, but also on what aspects of group functioning might be supported and reinforced in environments with a particular configuration

of resources. More fundamentally, this perspective does not attempt to reduce uncertainty and dependence but to provide a means of looking at the nature of that dependence and uncertainty. It does not assume that the organization should provide the resources a group needs, but it evaluates the degree of richness in the environment and suggests what that type of environment rewards. Together the two perspectives complement one another. One addresses ways of allocating resources to groups to enhance effectiveness while the other assumes the current array of resources will remain and the group must have the appropriate structure to survive.

To the remaining questions--How actually do groups manage their dependence? What types of organizational environments reward which group structures? What is the relationship of external activity to internal group processes?--organization and group theorists provide some responses.

Group-Organization Interaction

Central to the external perspective is the assumption that groups cannot maintain isolation from the rest of the organization and the task environment, because they depend upon the environment for resources. They must adapt to, mold, or be influenced by, changing environmental conditions. Therefore, a central activity of groups in context must be reaching out, directing activity outward. One new set of variables introduced by this perspective is the group's external activities. Different theoretical orientations predict different types of external linkages including negotiation, information exchange and scanning, profile management, and buffering.

Dealing With Dependence--Negotiating

We have said that the resource dependence perspective asserts that dependence on, and uncertainty about, actions of those outside the group creates uncertainty as to the survival of the group. Groups must manage these external dependencies. In organizational studies, researchers have described how organizations attempt to deal with their dependence using structures such as interlocking directorates, mergers, and joint ventures (see Pennings, 1980, Pfeffer, 1972; Van de Ven & Walker, 1984). At the group level, there are no perfect correlates to such structures, but researchers may find these ideas helpful in the design of groups. The structures attempt to co-opt or absorb interdependence by changing organizational boundaries. Groups can change their boundaries by exerting control over who is assigned to be in the group, how open or closed group membership will be, and whether group members also spend time in other parts of the organization or task environment (Gladstein & Caldwell, 1985).

As an example, let us examine a new product team that is dependent upon other groups in the organization to get the product designed and produced, say, marketing, manufacturing and sales. Much as an organization might, the group can try to have its leader serve on important committees in these other functional areas. It can invite marketing or manufacturing personnel to become group members during key periods of interdependence, or it can permanently include in the group all the people it needs from these other areas.

Besides structural mechanisms that lessen external dependence, group researchers have identified process behaviors that groups use to manage that dependence. Brett and Rognes (1986) argue that within the organizational context intergroup conflict is the main interface issue.

They assert that conflict occurs when groups that are linked in a power-dependency relationship disagree about the terms of that relationship. This conflict is endemic to organizations that function by transferring resources among specialized, differentiated groups (McCann & Galbraith, 1983). Brett and Rognes go on to say that although the causes of conflict are structural, intergroup negotiation can compensate for structure. The conflict is never resolved, because it is inherent in the system, but negotiation can result in exchange agreements that endure until changes in the environment make them obsolete.

It is important to note that an intergroup transaction is not the same as an interpersonal one, although both take place between individuals. A group member involved in intergroup transactions acts as a representative of the group, in accordance with the group's expectations. The member is not acting solely on an individual agenda (Brett & Rognes, 1986; Pfeffer, 1986).

Structural co-optation or negotiating are necessary for groups to acquire resources under conditions where those possessing the resources have a different preference ordering. The greater the dependence on external entities, the greater the need to absorb the dependence through shifting group boundaries or negotiating a settlement.

Adapting to the External Environment--Information Exchange and Scanning

A second aspect of dealing with the organization and task environment is adapting internal group functioning to meet external demands. In other words, the group must be able to reach out and adapt to its particular environment by tailoring its responses to the demands of others. The information processing approach is an adaptation model that has been applied at the group, as well as at the organization, level of

analysis. It argues that to be effective groups have to deal with work-related uncertainty. Uncertainty creates information processing requirements that the group adapts to by changing its information processing capability. Information collection and exchange is one means to accomplish this adaptation (Allen, 1970; Katz, 1982; Mintzberg, 1973).

At the group level, information collection and exchange have been studied extensively in communications studies in development teams. Research results have demonstrated a strong association between project performance and a high degree of technical communication with sources outside the group but within the organization (Allen, 1970; Farris, 1969). These results did not hold for sources outside the organization, ostensibly because of the difficulty of accurately communicating across organizational boundaries (Allen, 1984). It was discovered, however, that a group could effectively channel external information into the group by means of a gatekeeper. Communication is a two-step process: the gatekeeper first gathers external information, then translates it into useful terms that can be understood by other project members (Allen & Cohen, 1969; Katz & Tushman, 1981).

The information processing approach suggests that groups have to match their information collection and exchange to the level of uncertainty in the environment. An example of matching is the case of development projects communicating outside of the organization through a technological gatekeeper, while research project members have direct contact with outside sources. The critical difference between these kinds of projects is that development projects are more difficult for outsiders to understand since they are defined in organizational terms not universal scientific terms (Allen, Tushman & Lee, 1979).

While these studies have focused on research and development teams needing to import technical information, organizational researchers have studied a broader set of information flows. Adams (1980) predicts that two types of external information appear to be important to organizational and group functioning. One is operating information that is needed for current decision making and coordinating. This requires focused search. The other form of information is more unpredictable: it is about events that might occur, or that might have relevance to the organization or group if they did occur. To obtain this form of information, scanning the environment is required besides focused information exchange. Scanning allows groups to map their environment and note changing demands.

In a study of project group longevity, Katz (1982) found that over time groups tend to have less and less communication outside their borders. This leads to isolation from critical sources of new ideas, information, and feedback, and results in lower performance over time. If indeed, groups work to develop stable linking mechanisms, and negotiate settlements to deal with external uncertainty and dependence, these may become patterned and routine forms of interaction in which precedent plays a large part (Katz, 1982; Weick, 1969). Over time, as external contingencies change, such reliance on habit and old models of dependence results in poor adaptation. Hence, the scanning process--that is, collection of unpredictable as well as operating information appears critical for group performance (Adams, 1980).

Strategic Management--Profile Management

The emphasis of the last section was on the input of information from the environment in order to adapt. A group also has the option of exporting information in order to shape external demands and constraints.

Adams (1980) speaks of representation as a key boundary process. Representation involves developing and maintaining channels of communication with powerful outsiders in order to shape their beliefs and behaviors. Representation allows a group to take a more proactive approach. A related behavior that has been observed in groups is profile management. Here group members plan and manage the information that they send out to the external world in order to project the image they want others to have of them. Weick (1980) argues that managing eloquence is crucial in shaping how others interpret the behavior that they see. "If leaders can influence what people say to themselves, then they can influence what those same people are thinking" (Weick, 1980: 18). By providing meanings to those outside the group, the group controls their interpretation of what the group is doing.

For example, in The Soul of a New Machine (Kidder, 1981), Tom West, the leader of a team designing a computer, presents his computer differently to various groups. By presenting it as insurance (we will have it in case the other one doesn't work) to top management, he is allowed to set up a team that competes with another team in the company. By presenting it as a technical challenge to engineers, he is able to attract the best of them. By not saying anything at all to external competitors, he protects his company. Profile management lets the group influence its environment by shaping the image it wants to present of itself.

How can this need for importing and exporting information be balanced with the group's need to buffer itself from external interference?

Balancing Internal and External Demands--Buffering

The previous sections argue that the group must reach out to adapt to,

monitor, and change the organizational environment. Included in deciding when and how to reach out is deciding when not to. Thus, when Adams (1980) defines classes of boundary activities, he includes buffering: protecting the organization from external threat and pressure. While externally oriented activity such as negotiating and scanning helps the group to deal with demands, constraints, and opportunities from the outside, the external activity may hinder internal functions of coordinating group member effort and building a group culture that supports individual needs and fosters commitment to the group task (Parsons, 1960; Lyden, 1975).

Buffering may be adaptive or maladaptive. It is adaptive to the extent that it is used as a short-term tactic to prevent overload and/or to buy time for the group to get its internal functions running more efficiently (Adams, 1980). It is maladaptive if it is a long-term and sole response to external threat (Janis, 1972; Staw, Sandelands & Dutton, 1981). Long-term isolation, for example, can lead groups to become more and more out of touch with new environmental contingencies. That isolation may allow the group to move more quickly and efficiently, but in the wrong direction. Groups have to find ways of both identifying and adapting to external constraints and attending to internal functioning.

A recent study of new product teams in high technology companies found that groups cope with these disparate demands using the specialized roles of scout, ambassador, sentry, and guard (Gladstein & Caldwell, 1985). The scout scans the environment and brings information into the group, while the ambassador represents the group to outsiders and carries on the negotiation needed to obtain more resources. The sentry and guard protect the team by buffering the group from excess input, political pressure, and

attempts to take resources. The sentry and guard roles allow the group to focus on internal innovation, while the scout and ambassador deal with external relations. Over time effective groups will shift their emphasis on these roles to deal with shifts in internal and external priorities.

Population Ecology--Does the group have control?

While there are means by which the group deals with dependence, adaptation, and strategy, the population ecology perspective argues that natural selection governs group success. That is, the environment selects for survival those most fitted to the niche. Certain environments may reward more proactive behavior while others reward adaptation. At the same time inertia and resistance to change limit a group's ability to shift its process and structure. It is not known whether natural selection operates in groups in organizations. Nonetheless, some preliminary hypotheses have been made using organization level environmental dimensions and group process variables (Ancona & Salk, 1986). For example, it is predicted that organizations characterized by scarcity, decentralized distribution of resources, and heterogeneity will select for survival those groups that engage in more negotiating, information exchange, and scanning.

The hypotheses set forth by the organization theorists also might be tested at the group level. In a homogeneous environment there is similarity between the elements of the environment that the organization has to deal with, and this type of environment rewards standardized ways of dealing with the environment. Environmental stability is the degree to which there is turnover in the elements of the environment. A stable environment rewards formalized structures and tends to select organizations by age, because older organizations are farther along in the

learning curve. Established organizations, however, have more difficulty adapting to change because they have few established procedures for responding. Environmental concentration refers to the degree to which resources are spread throughout the environment or concentrated in particular locations. In concentrated environments strategies for getting resources can be more easily learned, and position in the environment determines selection. Consensus refers to the extent to which an organization's claim to a domain is disputed. Selection here is governed not only by defining a niche and acquiring resources, but also by obtaining legitimacy from other actors in the domain (Aldrich, 1979).

The new set of variables and perspectives that I have identified focuses attention from variables that influence group member attitudes and behaviors to those that the group must adopt to influence group performance in the organizational context. New categories for describing a group's environment and new processes to deal with that environment have been identified. It is left to address how to apply these variables profitably to classical areas of small group research, namely, group development and group decision making.

Group Development

Hundreds of studies of group development have been done (see Hare, 1973; Heinen & Jacobsen, 1976; Tuckman, 1965), but it is not clear that these group dynamics studies adequately address developmental issues in task groups within organizations. Most of these studies accord with Bennis & Shepard (1956) in postulating that group development requires the resolution of two major issues: authority and intimacy (how will

leadership emerge, and how close will members become?). Their focus is on interaction among group members.

This section summarizes some of the findings in the group development literature and shows some examples of what studies using the external perspective can provide to development theory.

Group Dynamics Literature

Group dynamics models of development typically describe the sequential stages through which therapy groups, self-growth groups, laboratory groups, or natural groups mature (see Dunphy, 1964; Mann, 1967; Mills, 1964; Tuckman & Jensen, 1977). Generally, during the initial stage, the individual group member is concerned with his or her personal role within the group, as well as in becoming familiar with other group members. Following this orientation period some degree of conflict develops, as group members confront issues about which members exert power and who will subsequently have control. As these issues of power and control are resolved, members become able to agree on group norms and rules that define the operational structure that the group can use to achieve its goals and/or complete its task. Heinen and Jacobsen (1976) in a review of the group development models conclude that the initial and final stages, (orientation and work) are similar among the models, but that the number and nature of the middle stages can vary.

Researchers have focused also on problem-solving phases and recursive models. Bales and Strodtbeck (1951) observed phases of orientation, evaluation, and control. Recursive models describe groups as not following a distinct set of stages, but rather as repeatedly returning to particular themes over time. In a review of recursive models, Shambaugh (1978) postulated that groups alternate between patterns showing closeness

and separateness. During periods of closeness, the group culture is established, while during periods of separateness group members carry on work-related tasks. Similarly Bion (1961) observed that groups go back and forth between work and three emotional states: dependency, fight-flight, and pairing.

It is important to note that an external perspective has been introduced in group development research. For example, in the Tavistock School the trainer in a training group represents external authority so group-trainer relations represent group-environmental relations. In his work on the development of group and organizational culture Schein (1985) is careful to point out that groups develop models about how to interact both internally and externally. Nonetheless, many group dynamics studies call for observing a laboratory or training group, then coding interpersonal behavior according to a prespecified scheme (e.g., shows agreement, or active, dominant, talks a lot (see Bales, 1958). A stage is considered ended when the dominant type of behavior changes. The study of development changes when the external perspective is applied more explicitly.

Applying the External Perspective to Group Development

From the external perspective, much has been left out of the study of group development. The question of how does the group adapt to the organizational environment gets added to the one of how do individuals come to know their role in the group. If group process is viewed as task and maintenance behavior, it is quite interesting to see that certain maintenance functions precede task functioning. What happens if process is viewed as intragroup and intergroup behavior? Which set of processes appears first? Are they taken on sequentially? Are there different rates of adaptation that can be matched to different early developmental sequences? Do different types of environments

cause, or reward, different developmental sequences?

The external perspective poses questions of earlier findings as well. Are there differences in the development of authority and intimacy when external relations are also being developed? Are there issues of authority and intimacy between the group and its external resource allocators as there are between the leader and group members? Is there an external interaction leader who emerges as the task and maintenance leaders emerge? How do groups develop when the time frame shifts from several hours or several weeks to several months or years? Fortunately, new group research has started to answer some of these questions.

In a study of eight temporary task forces in six different organizations, Gersick (1983) found that groups did not develop according to a series of universal stages as traditional group development models predict. Instead teams progressed in two main phases bisected by a major transition. Each team developed a unique framework of behavior patterns and approaches to work that formed almost immediately at the first meeting and remained through the first half of the group's existence. The midpoint between the group's first meeting and its deadline was seen as a transition point in all groups; at this time groups dropped old frameworks and searched for new ones. The new frameworks carried the group through a second period of momentum to a final burst of activity prior to the deadline.

Rather than a developmental model of distinct, identifiable, behavioral stages, we see a model of punctuated equilibrium (see Romanelli & Tushman, 1986) for the organizational counterpart) or a shift from inertia to revolution in framework and behavior. More interesting from the external perspective is the group's shift in openness to input from the external environment. It appears that the external environment has a major influence on the group only

at certain periods of time: at the first meeting when basic approaches to work are set up, and at the transition point when groups are looking for feedback from the context to reformulate their understanding of how to meet external demands. In contrast, the two major phases of activity are closed periods when the group takes a more internal focus (Gersick, 1983; Hackman & Walton, 1986).

In a second developmental study taking an external perspective, five consulting teams in a matrix structure were observed during the first five months of their existence (Ancona, 1986). Team leaders were interviewed before formation of the groups to determine their plans and expectations for operation of the teams. Three different types of plans existed: 1) internal passive, where the leader planned to have little interaction with the external environment, to model the environment and come up with a strategy based on team member knowledge, and to present the strategy to the external world once it was developed; 2) internal actives; leaders planned to model the environment based on existing team member knowledge but wanted to maintain their visibility to those who would use and evaluate their services; 3) external actives; leaders assumed that old models of the environment were not useful and that a lot of external interaction would be needed to revise their old models and to develop a strategy that matched external demands. External actives engaged in more diagnosis and discussion of possible strategies with those who would use and evaluate their services than other groups.

The teams actually developed in a manner similar to leader plans. In the short term, the internal passive team had trouble between the leader and members, and the external actives had some coordination problems. The internal actives were the most satisfied and cohesive. Evaluating performance a year later, however, the head of the organization and the head of human resources rated the external actives as the two highest performing teams. These two

teams had done the best job of satisfying external demands and communicating their accomplishments to top management.

Thus, while there appear to be long-term benefits to a style of early mapping of the external environment, there may be short-run costs in terms of satisfaction and cohesion. As in the Gersick (1983) study this research supports the need to examine both intragroup and external behaviors over time to get a full view of group development. Just as individuals must learn to adapt to being group members by satisfying individual and group goals, groups must learn to adapt to organizational contexts by satisfying both internal demands and external constraints. The group development literature would do well to focus as much on the latter as on the former and to examine the impact of different developmental sequences in various environmental contexts.

Group Decision Making

Much of the research on group decision making accepts a normative model of the decision-making process and examines how groups deviate from that process or proposes structures a group can use to maintain that process. Again this orientation assumes an internal or local perspective. If we apply an external perspective, the whole definition of normative comes into question.

The normative model of group decision making posits a process-performance relationship. Authors argue that outcomes for the organization will improve, if a group follows the normative model: 1) thoroughly canvasses a wide range of policy alternatives, 2) takes account of the full range of objectives to be fulfilled and the values implicated by the choice, 3) carefully weighs negative and positive consequences, 4) intensively searches for new information relevant for further evaluation, 5) accounts for new information, 6) re-examines

positive and negative consequences of all known alternatives, and 7) provides detailed provisions for implementation (Janis & Mann, 1977).

Unfortunately, groups do not often follow the normative model, and researchers documented deviations from it. Groups have been known to suffer from group polarization (Moscovici & Zavalloni, 1969), groupthink (Janis, 1972), decision biases (Tversky & Sattath, 1979), unconscious mechanisms that cause a group to stray from work behavior (Bion, 1961), solution-mindedness (Hoffman & Maier, 1964), and dominance of verbal, but not necessarily accurate, group members (Hoffman & Clark, 1979). Many structural and process mechanisms have been suggested to correct for these problems. Examples include more active discussion of performance strategies (Hackman, 1983), brainstorming (Osborn, 1957), scenario construction (Ackoff, 1971), and the use of the nominal group technique and the Delphi method (Delbecq, Van de Ven, & Gustafson, 1975). All these methods are aimed at getting the best decision.

Returning to an external perspective, however, we see that the group not only has to come up with a decision but also must adapt to an external environment. External constituencies need to be convinced that the decision is a good one and often have to be cajoled into playing a part in the implementation of that decision. A new product team might design a state of the art product, for example, but if manufacturing cannot produce it the effort is for naught. An external perspective can suggest alternative views of what is normative.

Some researchers who have taken this external perspective into account propose that, while the normative model operates under decision rationality, "action rationality" may be more appropriate when commitment and motivation are primary outcomes of interest (Brunsson, 1982). Here the objective is not arriving at the "best" decision in some abstract sense, but rather involving

people in the decision-making process in order to gain their input in molding the decision and their cooperation in implementing it. The emphasis changes to one of efficiency--how can decisions best be carried out (Pfeffer & Salancik, 1978).

Under action rationality, the group may be involved in symbolic management, establishing acceptability for the group and its activities. It does this by providing explanation, rationalization, and argument for chosen courses of action both within the group and externally. Myths, symbols, and images--even if they are stereotyped images--are used to legitimize behavior in the larger context (Gladstein & Quinn, 1985). Rationalization, stereotyping, and the illusion of unanimity are important tools in building commitment both within and outside the group, even though these are symptoms of groupthink.

Note that processes that are often labelled ineffective under conditions of decision rationality can be useful. These include: 1) seeking information that solely bolsters particular alternatives, 2) viewing group decisions as more favorable than is warranted objectively, 3) making suboptimal decisions to avoid conflict or to maintain cohesion, and 4) considering implementation throughout the process (Brunsson, 1982). The consideration of multiple alternatives could evoke dysfunctional uncertainty while consideration of all positive and negative consequences of alternatives also may increase uncertainty and conflict. At some point, bolstering of a few alternatives is needed to move the group along (Brunsson, 1982).

Both decision and action rationality may be appropriate under different conditions. Action rationality may be optimal for groups making decisions where a serious threat requires rapid cohesive action, when continuing unity is more important than other consequences, or when the group has as much information as it believes it can effectively obtain. In a top management

group, the spiraling incremental development of a company strategy requires that a group alternate between formulation and implementation and therefore, the decision making process may have to shift over time from decision to action rationality and back again. The balance may vary depending on the stage of organizational development and organizational mode (Gladstein & Quinn, 1985; Romanelli & Tushman, 1986). Here again, the external perspective suggests alternative group processes as well as alternative ways of evaluating those processes. A process that is normative in an isolated setting may be inappropriate in certain environmental contexts where commitment to the decision both inside and outside the group is most important. An external perspective sheds light on many other questions: What other kinds of decision processes that were thought of as negative are adaptive in the organizational context? Under what environmental conditions are these processes adaptive and maladaptive? Are group members able to correctly assess environmental conditions and change their mode of decision making?

Discussion

Researchers have often viewed groups as settings that shape individual preferences, attitudes, and decisions. This approach toward the group takes the internal perspective. The research lens is on the group boundary focusing inward. I have advocated an external perspective. That is to say, group process is not simply what goes on inside the group--it also encompasses how the group reaches out to the external environment. The level of analysis is not the individual but the group and its ability to adapt to environmental constraints. The group context includes not only those resources that the group receives at the onset but also the configuration of resources and

information in the group's environment that impose constraints and selectively reward particular group responses.

The external perspective borrows heavily from researchers at the organizational level of analysis, specifically those studying resource dependence, adaptation, and population ecology. These researchers offer a view of the group that complements the laboratory view. The group is not only an aggregation of individual preferences, but an entity whose activities are to some extent determined and rewarded by the pattern of dependence the group has with other parts of the organization. The group is also able to exert control over its environment by shaping external preferences.

While it is dangerous to assume that phenomena at one level of analysis can be translated to another level, empirical testing will be the final judge of the applicability of these concepts to the group level. Nonetheless, it is clear that groups, like organizations, are open systems with a layer of ties to other parts of the organization and external task environment, so the concepts may well apply.

This external perspective provides new directions in the area of group development and group decision making. The group must not only evolve in ways that allow individuals to develop positions of authority and intimacy, but it must also find ways to balance internal needs of coordination with external adaptation. Furthermore, individuals within the group assume positions not solely due to verbal acumen or charisma (individual characteristics) but also of their ability to deal with critical external contingencies that the group faces (Pfeffer, 1986). The group must come up with appropriate decisions, but it needs also to find ways to get outsiders to commit to those decisions.

Such a perspective forces us to rethink our traditional models, and methods. An organizational task group operates not in isolation, but it

reaches out to, or buffers itself from the organization. As the organization reacts to the group's behavior, a new cycle of activity begins. Researchers need to find ways to monitor and evaluate that group-context interaction. An orientation that specializes in the individual's perception of social reality added to an external organization perspective gives us expanded laboratory models.

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